

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776403

Luminaire Tested: HCDJBS3040CSD-HCD6TRMB-4000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776403
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B001-HCD6TRMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K
Description: 6 INCH ROUND MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2980.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

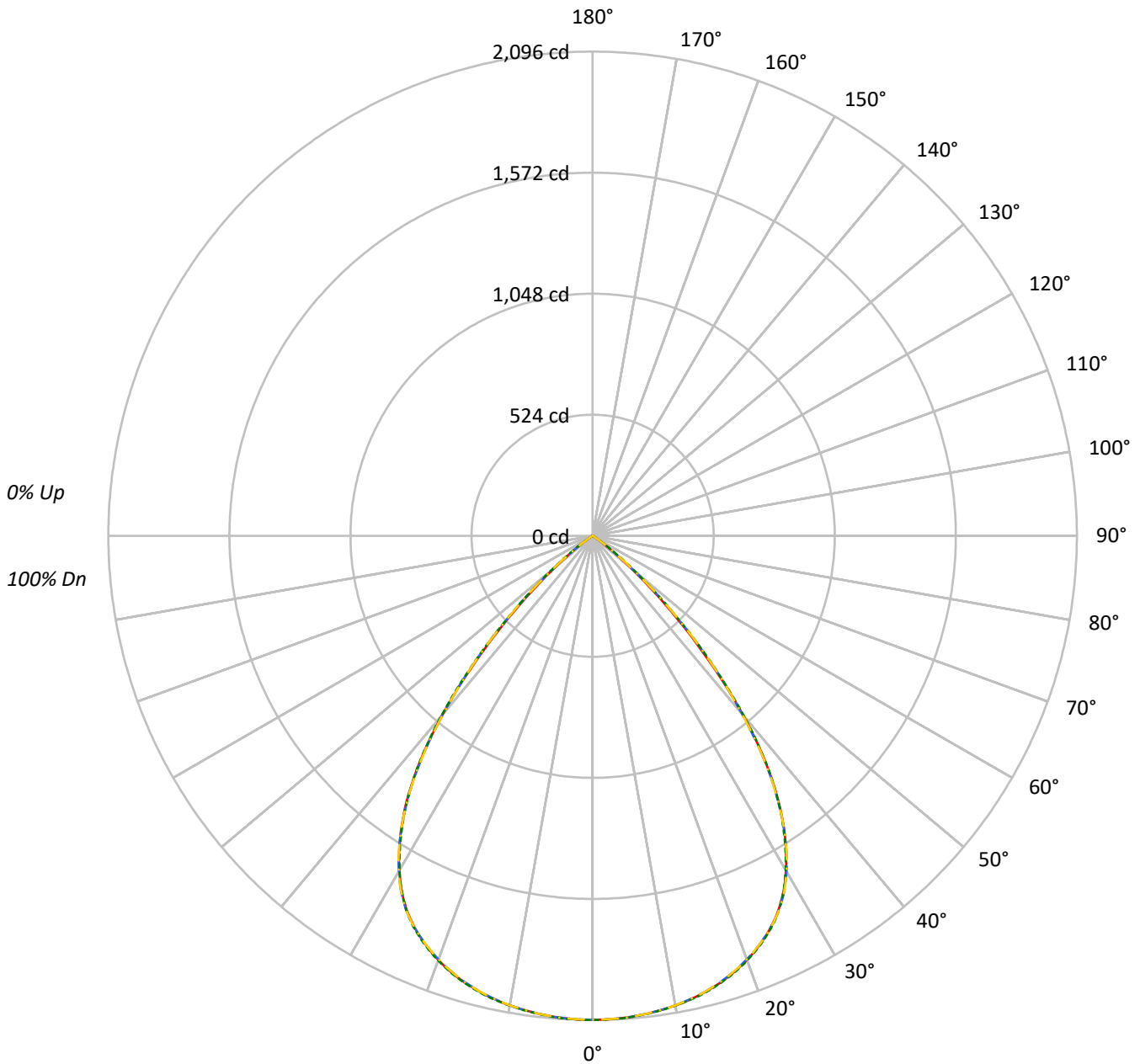
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	98	97	96	95	94	92
	1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	90	88	90	88	86	84
	2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84	84	81	79	84	81	79	77
	3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77	77	75	72	79	75	72	70
	4	94	86	80	75	92	85	79	75	83	78	74	80	76	73	79	75	72	70	70	67	64	73	69	66	64
	5	89	79	73	68	87	78	72	68	77	71	67	75	70	66	73	69	66	64	64	61	58	68	64	60	59
	6	83	73	67	62	82	73	66	62	71	65	61	70	65	61	68	64	60	59	59	56	53	64	59	56	54
	7	79	68	61	57	77	67	61	56	66	60	56	65	60	56	64	59	56	54	54	51	48	60	55	51	50
	8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50	50	47	44	59	55	51	46
	9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47	46	46	43	40	56	51	47	46
	10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42	42	39	36	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	114892	114892	114892	114892
5°	114885	114929	114885	114929
10°	114911	115000	114911	115000
15°	114779	114921	114779	114921
20°	113993	114133	113993	114133
25°	111805	112029	111805	112029
30°	105915	105763	105915	105763
35°	93886	93592	93886	93592
40°	72407	73015	72407	73015
45°	43284	45439	43284	45439
50°	17901	20579	17901	20579
55°	3469	4081	3469	4081
60°	263	263	263	263
65°	104	104	104	104
70°	64	64	64	64
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 45532 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.6	6.7
10°-20°	570.2	19.1
20°-30°	846.7	28.4
30°-40°	858.2	28.8
40°-50°	449.1	15.1
50°-60°	56.1	1.9
60°-70°	0.9	0.0
70°-80°	0.1	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1615.5	54.2
0°-40°	2473.7	83.0
0°-60°	2978.9	100.0
0°-90°	2980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2980.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2096	2096	2096	2096	2096	
5°	2088	2088	2088	2088	2088	199
15°	2022	2025	2022	2025	2022	570
25°	1848	1852	1848	1852	1848	846
35°	1403	1398	1403	1398	1403	860
45°	558	586	558	586	558	438
55°	36	43	36	43	36	52
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8
0.5°	2095.8	2095.3	2095.3	2095.3	2096.2	2095.3	2095.3	2095.3	2095.8	2095.3	2095.3
1°	2095.3	2095.3	2094.9	2094.9	2096.2	2094.9	2094.9	2095.3	2095.3	2095.3	2094.9
1.5°	2094.9	2094.9	2094.5	2094.5	2095.8	2094.5	2094.5	2094.9	2094.9	2094.9	2094.5
2°	2094.5	2094.1	2094.1	2094.1	2094.9	2094.1	2094.1	2094.1	2094.5	2094.1	2094.1
2.5°	2093.7	2093.3	2093.3	2093.3	2094.5	2093.3	2093.3	2093.3	2093.7	2093.3	2093.3
3°	2092.5	2092.5	2092.5	2092.5	2093.7	2092.5	2092.5	2092.5	2092.5	2092.5	2092.5
3.5°	2091.7	2091.7	2091.7	2091.3	2092.5	2091.3	2091.7	2091.7	2091.7	2091.7	2091.7
4°	2090.5	2090.5	2090.5	2090.5	2091.3	2090.5	2090.5	2090.5	2090.5	2090.5	2090.5
4.5°	2088.9	2088.9	2088.9	2088.9	2090.1	2088.9	2088.9	2088.9	2088.9	2088.9	2088.9
5°	2087.7	2087.7	2087.7	2087.7	2088.5	2087.7	2087.7	2087.7	2087.7	2087.7	2087.7
5.5°	2086.1	2086.1	2086.1	2086.1	2087.3	2086.1	2086.1	2086.1	2086.1	2086.1	2086.1
6°	2084.5	2084.1	2084.1	2084.1	2085.3	2084.1	2084.1	2084.1	2084.5	2084.1	2084.1
6.5°	2082.5	2082.1	2082.5	2082.5	2083.7	2082.5	2082.5	2082.1	2082.5	2082.1	2082.5
7°	2080.4	2080.0	2080.0	2080.4	2081.3	2080.4	2080.0	2080.0	2080.4	2080.0	2080.0
7.5°	2078.0	2078.0	2078.0	2078.0	2079.2	2078.0	2078.0	2078.0	2078.0	2078.0	2078.0
8°	2075.6	2075.6	2075.6	2075.6	2076.8	2075.6	2075.6	2075.6	2075.6	2075.6	2075.6
8.5°	2073.2	2072.8	2072.8	2073.2	2074.4	2073.2	2072.8	2072.8	2073.2	2072.8	2072.8
9°	2070.4	2070.4	2070.4	2070.4	2071.6	2070.4	2070.4	2070.4	2070.4	2070.4	2070.4
9.5°	2067.6	2067.2	2067.2	2067.6	2068.8	2067.6	2067.2	2067.2	2067.6	2067.2	2067.2
10°	2064.3	2064.3	2063.9	2064.3	2065.9	2064.3	2063.9	2064.3	2064.3	2064.3	2063.9
10.5°	2061.5	2060.7	2060.7	2061.1	2062.7	2061.1	2060.7	2060.7	2061.5	2060.7	2060.7
11°	2057.9	2057.5	2057.1	2057.9	2059.5	2057.9	2057.1	2057.5	2057.9	2057.5	2057.1
11.5°	2054.3	2053.5	2053.5	2054.3	2055.9	2054.3	2053.5	2053.5	2054.3	2053.5	2053.5
12°	2050.2	2049.8	2049.4	2050.2	2052.2	2050.2	2049.4	2049.8	2050.2	2049.8	2049.4
12.5°	2046.2	2045.4	2045.0	2046.2	2048.2	2046.2	2045.0	2045.4	2046.2	2045.4	2045.0
13°	2042.2	2041.4	2040.6	2041.8	2044.2	2041.8	2040.6	2041.4	2042.2	2041.4	2040.6
13.5°	2037.3	2036.5	2036.1	2037.3	2039.8	2037.3	2036.1	2036.5	2037.3	2036.5	2036.1
14°	2032.9	2031.7	2030.9	2032.5	2034.9	2032.5	2030.9	2031.7	2032.9	2031.7	2030.9
14.5°	2027.7	2026.9	2026.1	2027.3	2030.1	2027.3	2026.1	2026.9	2027.7	2026.9	2026.1
15°	2022.4	2021.2	2020.4	2022.0	2024.9	2022.0	2020.4	2021.2	2022.4	2021.2	2020.4
15.5°	2016.8	2015.6	2014.8	2016.4	2019.2	2016.4	2014.8	2015.6	2016.8	2015.6	2014.8
16°	2011.2	2010.0	2008.7	2010.8	2013.6	2010.8	2008.7	2010.0	2011.2	2010.0	2008.7
16.5°	2005.1	2003.5	2002.7	2004.7	2007.5	2004.7	2002.7	2003.5	2005.1	2003.5	2002.7
17°	1998.7	1997.1	1996.3	1998.3	2001.1	1998.3	1996.3	1997.1	1998.7	1997.1	1996.3
17.5°	1991.8	1990.6	1989.4	1991.4	1994.6	1991.4	1989.4	1990.6	1991.8	1990.6	1989.4
18°	1985.0	1983.4	1982.2	1984.6	1987.4	1984.6	1982.2	1983.4	1985.0	1983.4	1982.2
18.5°	1977.3	1976.1	1974.9	1977.3	1980.1	1977.3	1974.9	1976.1	1977.3	1976.1	1974.9
19°	1970.1	1968.5	1967.3	1969.7	1972.5	1969.7	1967.3	1968.5	1970.1	1968.5	1967.3
19.5°	1962.0	1960.8	1959.2	1961.6	1964.8	1961.6	1959.2	1960.8	1962.0	1960.8	1959.2
20°	1954.0	1952.4	1951.1	1953.6	1956.4	1953.6	1951.1	1952.4	1954.0	1952.4	1951.1
20.5°	1945.1	1943.9	1942.7	1945.1	1947.9	1945.1	1942.7	1943.9	1945.1	1943.9	1942.7
21°	1936.2	1935.0	1933.8	1936.2	1938.7	1936.2	1933.8	1935.0	1936.2	1935.0	1933.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1906.8	1905.6	1905.2	1907.2	1909.7	1907.2	1905.2	1905.6	1906.8	1905.6	1905.2
23°	1896.0	1895.2	1894.8	1897.2	1898.8	1897.2	1894.8	1895.2	1896.0	1895.2	1894.8
23.5°	1884.7	1884.3	1884.3	1886.3	1887.9	1886.3	1884.3	1884.3	1884.7	1884.3	1884.3
24°	1873.4	1873.0	1873.4	1874.6	1876.6	1874.6	1873.4	1873.0	1873.4	1873.0	1873.4
24.5°	1861.3	1861.3	1861.7	1862.9	1864.5	1862.9	1861.7	1861.3	1861.3	1861.3	1861.7
25°	1848.4	1848.8	1849.6	1850.4	1852.1	1850.4	1849.6	1848.8	1848.4	1848.8	1849.6
25.5°	1835.1	1835.5	1836.8	1836.8	1838.4	1836.8	1836.8	1835.5	1835.1	1835.5	1836.8
26°	1820.6	1821.4	1822.7	1822.7	1824.3	1822.7	1822.7	1821.4	1820.6	1821.4	1822.7
26.5°	1805.7	1806.9	1808.6	1807.8	1808.6	1807.8	1808.6	1806.9	1805.7	1806.9	1808.6
27°	1789.6	1791.2	1792.8	1791.6	1792.4	1791.6	1792.8	1791.2	1789.6	1791.2	1792.8
27.5°	1772.7	1774.7	1776.3	1774.7	1774.7	1774.7	1776.3	1774.7	1772.7	1774.7	1776.3
28°	1754.6	1757.0	1759.0	1756.6	1755.4	1756.6	1759.0	1757.0	1754.6	1757.0	1759.0
28.5°	1735.7	1738.5	1740.5	1737.7	1735.7	1737.7	1740.5	1738.5	1735.7	1738.5	1740.5
29°	1715.9	1718.7	1720.7	1717.9	1715.1	1717.9	1720.7	1718.7	1715.9	1718.7	1720.7
29.5°	1695.0	1698.2	1700.2	1697.0	1693.4	1697.0	1700.2	1698.2	1695.0	1698.2	1700.2
30°	1673.2	1675.6	1678.1	1674.4	1670.8	1674.4	1678.1	1675.6	1673.2	1675.6	1678.1
30.5°	1650.7	1653.1	1655.1	1651.1	1647.0	1651.1	1655.1	1653.1	1650.7	1653.1	1655.1
31°	1626.9	1628.9	1630.9	1627.3	1622.9	1627.3	1630.9	1628.9	1626.9	1628.9	1630.9
31.5°	1602.3	1603.5	1605.5	1601.5	1597.5	1601.5	1605.5	1603.5	1602.3	1603.5	1605.5
32°	1576.9	1576.9	1579.0	1574.9	1571.7	1574.9	1579.0	1576.9	1576.9	1576.9	1579.0
32.5°	1550.4	1550.0	1551.2	1547.1	1544.7	1547.1	1551.2	1550.0	1550.4	1550.0	1551.2
33°	1523.0	1521.4	1522.6	1518.5	1517.7	1518.5	1522.6	1521.4	1523.0	1521.4	1522.6
33.5°	1495.2	1492.4	1492.8	1489.1	1488.7	1489.1	1492.8	1492.4	1495.2	1492.4	1492.8
34°	1465.4	1462.2	1462.2	1458.1	1460.1	1458.1	1462.2	1462.2	1465.4	1462.2	1462.2
34.5°	1434.8	1431.1	1430.3	1426.3	1429.9	1426.3	1430.3	1431.1	1434.8	1431.1	1430.3
35°	1402.9	1398.9	1397.3	1394.5	1398.5	1394.5	1397.3	1398.9	1402.9	1398.9	1397.3
35.5°	1369.5	1366.3	1363.5	1361.9	1366.3	1361.9	1363.5	1366.3	1369.5	1366.3	1363.5
36°	1334.9	1332.5	1328.4	1327.6	1332.9	1327.6	1328.4	1332.5	1334.9	1332.5	1328.4
36.5°	1299.0	1297.0	1292.2	1292.6	1298.6	1292.6	1292.2	1297.0	1299.0	1297.0	1292.2
37°	1261.6	1260.4	1254.7	1256.7	1262.4	1256.7	1254.7	1260.4	1261.6	1260.4	1254.7
37.5°	1222.9	1222.5	1215.6	1219.3	1224.5	1219.3	1215.6	1222.5	1222.9	1222.5	1215.6
38°	1183.4	1183.0	1175.4	1180.6	1185.8	1180.6	1175.4	1183.0	1183.4	1183.0	1175.4
38.5°	1142.3	1141.9	1133.5	1140.7	1146.0	1140.7	1133.5	1141.9	1142.3	1141.9	1133.5
39°	1100.4	1099.2	1091.2	1100.4	1105.3	1100.4	1091.2	1099.2	1100.4	1099.2	1091.2
39.5°	1057.3	1055.3	1048.1	1058.5	1063.4	1058.5	1048.1	1055.3	1057.3	1055.3	1048.1
40°	1011.8	1010.2	1004.2	1015.0	1020.3	1015.0	1004.2	1010.2	1011.8	1010.2	1004.2
40.5°	966.7	964.7	960.7	971.1	975.6	971.1	960.7	964.7	966.7	964.7	960.7
41°	920.4	919.2	918.4	927.2	931.3	927.2	918.4	919.2	920.4	919.2	918.4
41.5°	874.5	873.3	876.1	883.3	887.0	883.3	876.1	873.3	874.5	873.3	876.1
42°	827.7	828.1	834.2	839.0	843.5	839.0	834.2	828.1	827.7	828.1	834.2
42.5°	781.4	783.4	791.9	795.9	800.0	795.9	791.9	783.4	781.4	783.4	791.9
43°	735.1	739.1	749.6	753.2	756.0	753.2	749.6	739.1	735.1	739.1	749.6
43.5°	689.6	695.2	707.3	710.9	712.5	710.9	707.3	695.2	689.6	695.2	707.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	558.3	566.3	582.4	587.3	586.1	587.3	582.4	566.3	558.3	566.3	582.4
45.5°	516.8	525.2	542.2	548.6	545.4	548.6	542.2	525.2	516.8	525.2	542.2
46°	476.1	486.2	503.9	510.3	505.5	510.3	503.9	486.2	476.1	486.2	503.9
46.5°	439.0	447.9	465.6	471.7	467.2	471.7	465.6	447.9	439.0	447.9	465.6
47°	402.0	410.4	427.8	434.6	429.8	434.6	427.8	410.4	402.0	410.4	427.8
47.5°	366.1	374.2	390.3	398.0	394.3	398.0	390.3	374.2	366.1	374.2	390.3
48°	330.7	339.2	354.9	363.3	360.9	363.3	354.9	339.2	330.7	339.2	354.9
48.5°	296.9	306.1	321.0	330.3	328.3	330.3	321.0	306.1	296.9	306.1	321.0
49°	265.8	274.7	288.4	298.5	298.9	298.5	288.4	274.7	265.8	274.7	288.4
49.5°	237.2	244.1	257.0	268.3	269.9	268.3	257.0	244.1	237.2	244.1	257.0
50°	209.9	215.9	226.8	238.9	241.3	238.9	226.8	215.9	209.9	215.9	226.8
50.5°	184.1	188.9	198.2	210.7	213.5	210.7	198.2	188.9	184.1	188.9	198.2
51°	160.3	164.7	173.6	184.5	187.3	184.5	173.6	164.7	160.3	164.7	173.6
51.5°	139.0	142.6	150.2	159.9	164.3	159.9	150.2	142.6	139.0	142.6	150.2
52°	118.8	122.0	128.5	137.0	141.8	137.0	128.5	122.0	118.8	122.0	128.5
52.5°	101.9	102.7	107.5	115.6	120.0	115.6	107.5	102.7	101.9	102.7	107.5
53°	86.2	85.8	89.8	97.5	100.7	97.5	89.8	85.8	86.2	85.8	89.8
53.5°	70.9	71.7	74.9	81.8	83.0	81.8	74.9	71.7	70.9	71.7	74.9
54°	57.6	58.8	60.8	66.9	66.9	66.9	60.8	58.8	57.6	58.8	60.8
54.5°	46.3	47.1	47.9	53.2	52.8	53.2	47.9	47.1	46.3	47.1	47.9
55°	36.3	35.8	36.7	41.1	42.7	41.1	36.7	35.8	36.3	35.8	36.7
55.5°	26.6	26.6	27.8	30.6	33.0	30.6	27.8	26.6	26.6	26.6	27.8
56°	17.7	18.9	20.9	23.4	25.4	23.4	20.9	18.9	17.7	18.9	20.9
56.5°	12.1	12.5	15.3	16.5	18.1	16.5	15.3	12.5	12.1	12.5	15.3
57°	9.7	8.9	10.1	10.9	10.9	10.9	10.1	8.9	9.7	8.9	10.1
57.5°	7.7	6.8	7.3	8.1	7.3	8.1	7.3	6.8	7.7	6.8	7.3
58°	6.0	5.6	6.0	6.4	5.2	6.4	6.0	5.6	6.0	5.6	6.0
58.5°	4.0	4.4	4.8	5.2	4.4	5.2	4.8	4.4	4.0	4.4	4.8
59°	3.6	3.6	3.6	4.0	3.6	4.0	3.6	3.6	3.6	3.6	3.6
59.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
60°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
60.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
61°	1.6	1.6	1.6	2.0	1.6	2.0	1.6	1.6	1.6	1.6	1.6
61.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
62°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.6	1.6
62.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
63°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
63.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
64°	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
73.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
74°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2095.8	2095.8	2095.8	2095.8	2095.8	2095.8
0.5°	2095.3	2096.2	2095.3	2095.3	2095.3	2095.8
1°	2094.9	2096.2	2094.9	2094.9	2095.3	2095.3
1.5°	2094.5	2095.8	2094.5	2094.5	2094.9	2094.9
2°	2094.1	2094.9	2094.1	2094.1	2094.1	2094.5
2.5°	2093.3	2094.5	2093.3	2093.3	2093.3	2093.7
3°	2092.5	2093.7	2092.5	2092.5	2092.5	2092.5
3.5°	2091.3	2092.5	2091.3	2091.7	2091.7	2091.7
4°	2090.5	2091.3	2090.5	2090.5	2090.5	2090.5
4.5°	2088.9	2090.1	2088.9	2088.9	2088.9	2088.9
5°	2087.7	2088.5	2087.7	2087.7	2087.7	2087.7
5.5°	2086.1	2087.3	2086.1	2086.1	2086.1	2086.1
6°	2084.1	2085.3	2084.1	2084.1	2084.1	2084.5
6.5°	2082.5	2083.7	2082.5	2082.5	2082.1	2082.5
7°	2080.4	2081.3	2080.4	2080.0	2080.0	2080.4
7.5°	2078.0	2079.2	2078.0	2078.0	2078.0	2078.0
8°	2075.6	2076.8	2075.6	2075.6	2075.6	2075.6
8.5°	2073.2	2074.4	2073.2	2072.8	2072.8	2073.2
9°	2070.4	2071.6	2070.4	2070.4	2070.4	2070.4
9.5°	2067.6	2068.8	2067.6	2067.2	2067.2	2067.6
10°	2064.3	2065.9	2064.3	2063.9	2064.3	2064.3
10.5°	2061.1	2062.7	2061.1	2060.7	2060.7	2061.5
11°	2057.9	2059.5	2057.9	2057.1	2057.5	2057.9
11.5°	2054.3	2055.9	2054.3	2053.5	2053.5	2054.3
12°	2050.2	2052.2	2050.2	2049.4	2049.8	2050.2
12.5°	2046.2	2048.2	2046.2	2045.0	2045.4	2046.2
13°	2041.8	2044.2	2041.8	2040.6	2041.4	2042.2
13.5°	2037.3	2039.8	2037.3	2036.1	2036.5	2037.3
14°	2032.5	2034.9	2032.5	2030.9	2031.7	2032.9
14.5°	2027.3	2030.1	2027.3	2026.1	2026.9	2027.7
15°	2022.0	2024.9	2022.0	2020.4	2021.2	2022.4
15.5°	2016.4	2019.2	2016.4	2014.8	2015.6	2016.8
16°	2010.8	2013.6	2010.8	2008.7	2010.0	2011.2
16.5°	2004.7	2007.5	2004.7	2002.7	2003.5	2005.1
17°	1998.3	2001.1	1998.3	1996.3	1997.1	1998.7
17.5°	1991.4	1994.6	1991.4	1989.4	1990.6	1991.8
18°	1984.6	1987.4	1984.6	1982.2	1983.4	1985.0
18.5°	1977.3	1980.1	1977.3	1974.9	1976.1	1977.3
19°	1969.7	1972.5	1969.7	1967.3	1968.5	1970.1
19.5°	1961.6	1964.8	1961.6	1959.2	1960.8	1962.0
20°	1953.6	1956.4	1953.6	1951.1	1952.4	1954.0
20.5°	1945.1	1947.9	1945.1	1942.7	1943.9	1945.1
21°	1936.2	1938.7	1936.2	1933.8	1935.0	1936.2



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1907.2	1909.7	1907.2	1905.2	1905.6	1906.8
23°	1897.2	1898.8	1897.2	1894.8	1895.2	1896.0
23.5°	1886.3	1887.9	1886.3	1884.3	1884.3	1884.7
24°	1874.6	1876.6	1874.6	1873.4	1873.0	1873.4
24.5°	1862.9	1864.5	1862.9	1861.7	1861.3	1861.3
25°	1850.4	1852.1	1850.4	1849.6	1848.8	1848.4
25.5°	1836.8	1838.4	1836.8	1836.8	1835.5	1835.1
26°	1822.7	1824.3	1822.7	1822.7	1821.4	1820.6
26.5°	1807.8	1808.6	1807.8	1808.6	1806.9	1805.7
27°	1791.6	1792.4	1791.6	1792.8	1791.2	1789.6
27.5°	1774.7	1774.7	1774.7	1776.3	1774.7	1772.7
28°	1756.6	1755.4	1756.6	1759.0	1757.0	1754.6
28.5°	1737.7	1735.7	1737.7	1740.5	1738.5	1735.7
29°	1717.9	1715.1	1717.9	1720.7	1718.7	1715.9
29.5°	1697.0	1693.4	1697.0	1700.2	1698.2	1695.0
30°	1674.4	1670.8	1674.4	1678.1	1675.6	1673.2
30.5°	1651.1	1647.0	1651.1	1655.1	1653.1	1650.7
31°	1627.3	1622.9	1627.3	1630.9	1628.9	1626.9
31.5°	1601.5	1597.5	1601.5	1605.5	1603.5	1602.3
32°	1574.9	1571.7	1574.9	1579.0	1576.9	1576.9
32.5°	1547.1	1544.7	1547.1	1551.2	1550.0	1550.4
33°	1518.5	1517.7	1518.5	1522.6	1521.4	1523.0
33.5°	1489.1	1488.7	1489.1	1492.8	1492.4	1495.2
34°	1458.1	1460.1	1458.1	1462.2	1462.2	1465.4
34.5°	1426.3	1429.9	1426.3	1430.3	1431.1	1434.8
35°	1394.5	1398.5	1394.5	1397.3	1398.9	1402.9
35.5°	1361.9	1366.3	1361.9	1363.5	1366.3	1369.5
36°	1327.6	1332.9	1327.6	1328.4	1332.5	1334.9
36.5°	1292.6	1298.6	1292.6	1292.2	1297.0	1299.0
37°	1256.7	1262.4	1256.7	1254.7	1260.4	1261.6
37.5°	1219.3	1224.5	1219.3	1215.6	1222.5	1222.9
38°	1180.6	1185.8	1180.6	1175.4	1183.0	1183.4
38.5°	1140.7	1146.0	1140.7	1133.5	1141.9	1142.3
39°	1100.4	1105.3	1100.4	1091.2	1099.2	1100.4
39.5°	1058.5	1063.4	1058.5	1048.1	1055.3	1057.3
40°	1015.0	1020.3	1015.0	1004.2	1010.2	1011.8
40.5°	971.1	975.6	971.1	960.7	964.7	966.7
41°	927.2	931.3	927.2	918.4	919.2	920.4
41.5°	883.3	887.0	883.3	876.1	873.3	874.5
42°	839.0	843.5	839.0	834.2	828.1	827.7
42.5°	795.9	800.0	795.9	791.9	783.4	781.4
43°	753.2	756.0	753.2	749.6	739.1	735.1
43.5°	710.9	712.5	710.9	707.3	695.2	689.6



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	587.3	586.1	587.3	582.4	566.3	558.3
45.5°	548.6	545.4	548.6	542.2	525.2	516.8
46°	510.3	505.5	510.3	503.9	486.2	476.1
46.5°	471.7	467.2	471.7	465.6	447.9	439.0
47°	434.6	429.8	434.6	427.8	410.4	402.0
47.5°	398.0	394.3	398.0	390.3	374.2	366.1
48°	363.3	360.9	363.3	354.9	339.2	330.7
48.5°	330.3	328.3	330.3	321.0	306.1	296.9
49°	298.5	298.9	298.5	288.4	274.7	265.8
49.5°	268.3	269.9	268.3	257.0	244.1	237.2
50°	238.9	241.3	238.9	226.8	215.9	209.9
50.5°	210.7	213.5	210.7	198.2	188.9	184.1
51°	184.5	187.3	184.5	173.6	164.7	160.3
51.5°	159.9	164.3	159.9	150.2	142.6	139.0
52°	137.0	141.8	137.0	128.5	122.0	118.8
52.5°	115.6	120.0	115.6	107.5	102.7	101.9
53°	97.5	100.7	97.5	89.8	85.8	86.2
53.5°	81.8	83.0	81.8	74.9	71.7	70.9
54°	66.9	66.9	66.9	60.8	58.8	57.6
54.5°	53.2	52.8	53.2	47.9	47.1	46.3
55°	41.1	42.7	41.1	36.7	35.8	36.3
55.5°	30.6	33.0	30.6	27.8	26.6	26.6
56°	23.4	25.4	23.4	20.9	18.9	17.7
56.5°	16.5	18.1	16.5	15.3	12.5	12.1
57°	10.9	10.9	10.9	10.1	8.9	9.7
57.5°	8.1	7.3	8.1	7.3	6.8	7.7
58°	6.4	5.2	6.4	6.0	5.6	6.0
58.5°	5.2	4.4	5.2	4.8	4.4	4.0
59°	4.0	3.6	4.0	3.6	3.6	3.6
59.5°	2.8	2.8	2.8	2.8	2.8	2.8
60°	2.4	2.4	2.4	2.4	2.4	2.4
60.5°	2.0	2.0	2.0	2.0	2.0	2.0
61°	2.0	1.6	2.0	1.6	1.6	1.6
61.5°	1.6	1.6	1.6	1.6	1.6	1.6
62°	1.6	1.6	1.6	1.6	1.6	1.2
62.5°	1.2	1.2	1.2	1.2	1.2	1.2
63°	1.2	1.2	1.2	1.2	1.2	1.2
63.5°	1.2	1.2	1.2	1.2	1.2	1.2
64°	0.8	1.2	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.4	0.4	0.4	0.4	0.4	0.4
68°	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.0
73.5°	0.4	0.4	0.4	0.4	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776403

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMB-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Scaled Data Report



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Scaled Data Report





21.5°	1927.0	1925.4	1924.6	1927.0	1929.4	1927.0	1924.6	1925.4	1927.0	1925.4	1924.6
22°	1916.9	1916.1	1914.9	1917.3	1919.3	1917.3	1914.9	1916.1	1916.9	1916.1	1914.9



44°	644.5	651.7	665.0	669.0	669.9	669.0	665.0	651.7	644.5	651.7	665.0
44.5°	601.0	608.6	623.5	628.0	627.6	628.0	623.5	608.6	601.0	608.6	623.5



66.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
67°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	1927.0	1929.4	1927.0	1924.6	1925.4	1927.0
22°	1917.3	1919.3	1917.3	1914.9	1916.1	1916.9



44°	669.0	669.9	669.0	665.0	651.7	644.5
44.5°	628.0	627.6	628.0	623.5	608.6	601.0

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66.5°	0.8	0.8	0.8	0.8	0.8	0.8
67°	0.8	0.8	0.8	0.8	0.4	0.4

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89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)